3rd
4th
5th
6th
7th
8th

Grade 3

meap™
Michigan Educational Assessment Program

Item Descriptors

MATHEMATICS

FALL 2012

MICHIGAN STATE BOARD OF EDUCATION
STATEMENT OF ASSURANCE OF COMPLIANCE WITH FEDERAL LAW

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NOTE: For each item listed throughout this booklet, the first statement is a summary of the Michigan Grade Level Content Expectation (GLCE) and the second statement is the descriptor for the item's stem or question.

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Students were instructed to read the directions below silently as the test administrator read them aloud.

PART 1

DIRECTIONS

This test has two parts. You may **NOT** use a calculator on any part of this test. You may use open space in this test booklet for scratch paper.

The items on this test are all multiple-choice. Multiple-choice items require you to choose the best answer from among three answer choices. Mark your answer in your test booklet by completely filling in the bubble next to the correct answer. Use only a No. 2 pencil to mark your answer in your test booklet. If you erase an answer, be sure to erase it completely.

Be careful not to make any marks in the bubbles next to the letters A, B, or C except for the one that goes with your answer. You may **NOT** use any other paper to do your work.

Sample Multiple-Choice Item:

Julia had $5.00. She spent $2.54. How much money did she have left?

○ **A** $7.54

○ **B** $3.54

● **C** $2.46

For this sample item, the correct answer is **C**. Circle **C** is filled in.

Once you have reached the word **STOP** in your test booklet, do **NOT** go on to the next page.

If you finish early, you may check your work in Part 1 of the test **ONLY**.

Do **NOT** look at items in Part 2 of the test.

NOTE: The directions for Part 2 are the same as the above instructions.

1 **N.ME.02.01:** Count to 1000 by 1's, 10's, and 100's starting from any number in the sequence.

Skip count by tens.

A skip counted by 1

B correct

C subtracted 1 from subsequent number

2 **N.ME.02.01:** Count to 1000 by 1's, 10's, and 100's starting from any number in the sequence.

Skip count by 100.

A skip counted by ten

B correct

C subtract 10 from subsequent number

3 **N.ME.02.02:** Read and write numbers to 1000 in numerals and words, and relate them to the quantities they represent.

Select block model that matches given word form of number.

A correct

B transposed 2 of 100s blocks with 10s blocks

C transposed 4 of 1s blocks with 10s blocks

4 **N.ME.02.02:** Read and write numbers to 1000 in numerals and words, and relate them to the quantities they represent.

Translate word form of number into standard form.

A correct

B transposed ones place and tens place

C abc = a,00c

5 **N.ME.02.03:** Compare and order numbers to 1000; use the symbols > and <.

Order set of 3-digit numbers from least to greatest.

A correct

B mixed order

C greatest to least

6 **N.ME.02.03:** Compare and order numbers to 1000; use the symbols > and <.

Compare two 3-digit numbers.

A incorrect inequality

B correct

C incorrect inequality

7 **N.ME.02.03:** Compare and order numbers to 1000; use the symbols > and <.

Identify correct inequality with two 3-digit numbers.

A incorrect in tens place

B correct

C incorrect in tens place

8 **N.FL.02.06:** Decompose 100 into addition pairs, e.g., 99 + 1, 98 + 2.

Select addition pair that has value of 100.

A correct

B product of two addends equal 100

C addition pair gives sum of 110

9 **N.FL.02.06:** Decompose 100 into addition pairs, e.g., 99 + 1, 98 + 2.

x + ___ = y

A under by 10

B correct

C over by 10

10 **N.FL.02.06:** Decompose 100 into addition pairs, e.g., 99 + 1, 98 + 2.

Select addition pair that has value of 100.

A addition pair gives sum of 110

B addition pair gives sum of 90

C correct

11 N.MR.02.07: Find the distance between numbers on the number line, e.g., How far is 79 from 26?

Given two points on a number line, find distance in units.

A correct

B over by 1

C subtracted smaller values from larger values

12 G.GS.02.04: Distinguish between curves and straight lines and between curved surfaces and flat surfaces.

Identify shape with curved surface.

A shape with all flat surfaces

B shape with all flat surfaces

C correct

13 N.MR.02.08: Find missing values in open sentences, e.g., 42 + box = 57; use relationship between addition and subtraction.

x - ___ = y

A under by 10

B correct

C over by 10

14 N.MR.02.08: Find missing values in open sentences, e.g., 42 + box = 57; use relationship between addition and subtraction.

x + ___ = y

A correct

B subtracted smaller values from larger values

C added instead of subtracted

15 N.MR.02.09: Given a contextual situation that involves addition and subtraction using numbers through 99: model using objects or pictures; explain in words; record using numbers and symbols; solve.

Subtract in context.

A incorrect in ones place

B correct

C subtracted smaller values from larger values

16 **N.MR.02.08:** Find missing values in open sentences, e.g., 42 + box = 57; use relationship between addition and subtraction.

x + ___ = y

A correct

B over by 10

C subtracted in ones place but added in tens place

17 **N.FL.02.10:** Add fluently two numbers through 99, using strategies including formal algorithms; subtract fluently two numbers through 99.

Add two 2-digit numbers.

A under by 10

B under by 1

C correct

18 **N.FL.02.10:** Add fluently two numbers through 99, using strategies including formal algorithms; subtract fluently two numbers through 99.

Subtract two 2-digit numbers.

A subtracted smaller values from larger values

B over by 10

C correct

19 **M.PS.02.02:** Compare lengths; add and subtract lengths (no conversion of units).

Subtract lengths in context.

A correct

B subtracted in tens place but added in ones place

C added instead of subtracted

20 **M.PS.02.02:** Compare lengths; add and subtract lengths (no conversion of units).

Subtract lengths in context.

A correct

B subtracted in tens place but added in ones place

C added instead of subtracted

21 M.UN.02.03: Measure area using non-standard units to the nearest whole unit.

Determine number of cookies that will fit on cookie sheet.

A half of correct total

B correct

C twice correct total

22 M.TE.02.11: Determine perimeters of rectangles and triangles by adding lengths of sides, recognizing the meaning of perimeter.

Find perimeter of equilateral triangle.

A length of one side

B length of two sides

C correct

23 M.TE.02.04: Find the area of a rectangle with whole number side lengths by covering with unit squares and counting, or by using a grid of unit squares; write the area as a product.

Find the dimensions of the rectangle in square cm using the grid.

A $a \times b = a + b$

B $a \times b = a \times (b - 1)$

C correct

24 M.PS.02.10: Solve simple word problems involving length and money.

Subtract in context.

A correct

B incorrect difference

C added instead of subtracted

25 M.PS.02.10: Solve simple word problems involving length and money.

Add in context.

A subtracted

B subtracted smaller values from larger values

C correct

26 M.TE.02.11: Determine perimeters of rectangles and triangles by adding lengths of sides, recognizing the meaning of perimeter.

Find perimeter of equilateral triangle.

A correct

B length of 2 sides

C length of one side

27 M.TE.02.11: Determine perimeters of rectangles and triangles by adding lengths of sides, recognizing the meaning of perimeter.

Find perimeter of equilateral triangle.

A length of two sides

B correct

C square of side length

28 M.UN.02.05: Using both A.M. and P.M., tell and write time from the clock face in 5-minute intervals, and from digital clocks to the minute; include reading time: 9:15 as nine-fifteen and 9:50 as nine-fifty. Interpret time both as minutes after the hour and minutes before the next hour, e.g., 8:50 as eight-fifty and ten to nine. Show times by drawing hands on clock face.

Identify the clock that matches given time.

A correct

B transposed hours and minutes

C x minutes after y = 5y minutes after x

29 D.RE.02.02: Read and interpret pictographs with scales, using scale factors of 2 and 3.

Interpret pictograph with scale of 3.

A did not apply scale

B used scale of 2 instead of 3

C correct

30 D.RE.02.03: Solve problems using information in pictographs; include scales such as "each box represents 2 apples."; avoid partial cases.

Interpret pictograph with scale of 3.

A correct

B did not extent pattern but added given symbols

C did not apply scale

31 D.RE.02.01: Make pictographs using a scale representation, using scales where symbols equal more than one.

Identify pictograph that matches the given information.

A correct

B incorrect total

C did not apply scale

32 D.RE.02.01: Make pictographs using a scale representation, using scales where symbols equal more than one.

Interpret pictograph with scale of 3.

A did not use scale

B correct

C incorrect number of missing symbols

33 D.RE.02.03: Solve problems using information in pictographs; include scales such as "each box represents 2 apples."; avoid partial cases.

Interpret pictograph with scale of 3.

A did not use scale

B incorrect difference

C correct

34 D.RE.02.02: Read and interpret pictographs with scales, using scale factors of 2 and 3.

Interpret pictograph with scale of 2.

A did not use scale

B incorrect total

C correct

35 G.GS.02.01: Identify, describe, and compare familiar two-dimensional and three-dimensional shapes, such as triangles, rectangles, squares, circles, semi-circles, spheres, and rectangular prisms.

Identify the name of a 3-D shape, given a diagram.

A 2-D version of shape

B correct

C incorrect 3-D shape

36 G.GS.02.01: Identify, describe, and compare familiar two-dimensional and three-dimensional shapes, such as triangles, rectangles, squares, circles, semi-circles, spheres, and rectangular prisms.

Compare number of sides of two polygons.

A correct

B one more side than difference

C two more sides than difference, also number of sides of one of polygons

37 G.GS.02.02: Explore and predict the results of putting together and taking apart two-dimensional and three-dimensional shapes.

Identify shape resulting from putting together two 2-D shapes.

A result of putting together 4 of given shapes

B incorrect shape

C correct

38 G.GS.02.01: Identify, describe, and compare familiar two-dimensional and three-dimensional shapes, such as triangles, rectangles, squares, circles, semi-circles, spheres, and rectangular prisms.

Identify a list of 3-D shapes.

A list contains two 2-D shapes

B correct

C list contains one 2-D shape

39 N.MR.02.07: Find the distance between numbers on the number line, e.g., How far is 79 from 26?

Given two points on a number line, find distance in units.

A correct

B over by 2

C subtracted smaller values from larger values

40 G.GS.02.04: Distinguish between curves and straight lines and between curved surfaces and flat surfaces.

Select 3-D shape with given characteristic.

A correct

B incorrect 3-D shape

C incorrect 3-D shape

41 G.SR.02.05: Classify familiar plane and solid objects, e.g., square, rectangle, rhombus, cube, pyramid, prism, cone, cylinder, and sphere, by common attributes such as shape, size, color, roundness, or number of corners and explain which attributes are being used for classification.

Compare two sets of figures.

A correct

B incorrect comparison

C incorrect comparison

42 G.SR.02.05: Classify familiar plane and solid objects, e.g., square, rectangle, rhombus, cube, pyramid, prism, cone, cylinder, and sphere, by common attributes such as shape, size, color, roundness, or number of corners and explain which attributes are being used for classification.

Identify shape with given number of vertices.

A correct

B incorrect shape

C incorrect shape

43 G.TR.02.06: Recognize that shapes that have been slid, turned, or flipped are the same shape, e.g., a square rotated 45 degrees is still a square.

Identify flip of a shape.

A translation

B correct

C rotation and reflection

44 N.FL.02.11: Estimate the sum of two numbers with three digits.

Estimate sum of two 3-digit numbers to nearest hundred.

A under by 200

B under by 100

C correct

45 N.FL.02.10: Add fluently two numbers through 99, using strategies including formal algorithms; subtract fluently two numbers through 99.

Add two 2-digit numbers.

A subtracted smaller values from larger values

B under by 10

C correct

46 N.ME.02.01: Count to 1000 by 1's, 10's, and 100's starting from any number in the sequence.

Skip count by 10s twice.

A correct

B skip counted by ten, then skip counted by one

C skip counted by one twice

47 N.ME.02.18: Recognize, name, and represent commonly used unit fractions with denominators 12 or less; model 1/2, 1/3, and 1/4 by folding strips.

Match given fraction strip to fraction.

A correct

B ratio of shaded to non-shaded portion

C ratio of non-shaded to shaded portion

48 N.ME.02.18: Recognize, name, and represent commonly used unit fractions with denominators 12 or less; model 1/2, 1/3, and 1/4 by folding strips.

Match given fraction strip to fraction.

A incorrect fraction

B correct

C ratio of shaded to non-shaded portion

49 N.ME.02.22: Recognize that fractions such as 2/2, and 3/3 and 4/4 are equal to the whole (one).

Recognize fraction that is equal to one whole.

A numerator = 1

B correct

C denominator = 1

50 N.MR.02.16: Given a simple situation involving groups of equal size or of sharing equally, represent with objects, words, and symbols; solve.

Divide in context.

A correct

B subtracted instead of divided

C added instead of divided

51 N.MR.02.16: Given a simple situation involving groups of equal size or of sharing equally, represent with objects, words, and symbols; solve.

Divide in context of equal groups.

A correct

B one more than correct quotient

C added instead of divided

52 N.MR.02.14: Represent multiplication using area and array models.

Identify array that matches given expression.

A correct

B $a \times b = a + b$

C $a \times b = (b + 1) \times a$

53 N.MR.02.16: Given a simple situation involving groups of equal size or of sharing equally, represent with objects, words, and symbols; solve.

Calculate result of equal sharing.

A correct

B subtracted instead of divided

C added instead of divided

3rd

4th

5th

6th

7th

8th

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